码农 the code maker

增刊

Linus && Linux



portrait by
zendiixx

一生只为寻找欢笑

这个极客很有种

Git为何不用C++开发

Linux发展编年史

一个人加上一百万人的智慧

分布式开发样板

你可能不知道的Shell

iTuring.cn

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[illegible] Linus [illegible] Linux
[illegible]
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091507240605ToBeReplacedWithUserId

Linus[illegible]



[illegible]/ [illegible]

[illegible]70[illegible]Blogger[illegible]MacTalk·[illegible]IT[illegible]Apple [illegible] Google [illegible]sagacity-mac

[illegible] 1997 [illegible] “[illegible] 100% [illegible]”[illegible]97%[illegible] 3%[illegible] PC [illegible]Windows[illegible]Android[illegible]OS X [illegible]iOS[illegible]BlackBerry[illegible]Linux[illegible]

[illegible] Google [illegible] Kindle [illegible] QQ [illegible] Linux [illegible] Linux [illegible] Linux [illegible] [illegible]

[illegible]Linux [illegible]·[illegible] Linux [illegible] Git [illegible]

[illegible] 2001 [illegible] *Just for Fun*[illegible]·[illegible] 2005 [illegible] Git[illegible] Git [illegible] Github [illegible] Git [illegible] Linux [illegible] Git[illegible] “My name is Linus, and I am your God.”

Linus[illegible]——[illegible]

1969 [illegible] 60 [illegible]
[illegible]“[illegible]”[illegible]
[illegible] Galaxy Note [illegible]
[illegible]

[illegible] Nerd[illegible]

[illegible]1[illegible]

[illegible]

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Linus[illegible]——[illegible]

[illegible]……[illegible]12[illegible]

[illegible]“[illegible]”

[illegible] Nerd[illegible]

[illegible]Commodore VIC-20 [illegible]Commodore [illegible]1994 [illegible] Basic [illegible]

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[illegible]11[illegible]“[illegible]”[illegible]

Linus [illegible]——[illegible]

[illegible]·[illegible]“[illegible]” [illegible]

[illegible] Unix [illegible] Unix [illegible] Unix [illegible]·[illegible]·[illegible]Fortran[illegible]BCPL[illegible]Basic Combined Programming Lanugage[illegible] B [illegible]B [illegible]·[illegible] B [illegible] B [illegible] B [illegible]——New B[illegible]40[illegible]New B[illegible] C [illegible] C [illegible] Unix [illegible]Unix [illegible] C [illegible]

[illegible]Unix [illegible] C [illegible] “[illegible] 719 [illegible]”

[illegible]Unix [illegible] Unix [illegible] System Call[illegible] fork[illegible]clone[illegible] open[illegible]close[illegible]read[illegible]write[illegible]Unix [illegible] IPC[illegible] pipe[illegible] GUI[illegible] IPC [illegible] Unix [illegible]

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history | grep apache
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[illegible] apache [illegible]“ | ”[illegible]shell[illegible]“[illegible]” [illegible]

[illegible]

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[illegible]

Linus□□□——Linux □□

Unix□□20□□ 60 □□□□ 70 □□□□□□□□□□□□□□□□□□□□□□□□□□□□□
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[illegible]

[illegible] Linux [illegible] vi[illegible] to be continued[illegible]……

[illegible]

[illegible] 6 [illegible] Unix [illegible]1991 [illegible] 7 [illegible] 3 [illegible] 10 [illegible] MINIX [illegible] POSIX[1] [illegible]

[1] [illegible]POSIX [illegible]“[illegible]” [illegible]Portable Operating System Interface[illegible]IEEE [illegible] POSIX [illegible] UNIX [illegible]POSIX [illegible] UNIX [illegible] Linux [illegible] Windows NT [illegible]POSIX [illegible] Linux [illegible]Linux [illegible]

[illegible]Minix[illegible]POSIX[illegible] POSIX[illegible]FTP[illegible] Linux [illegible] POSIX [illegible]·[illegible] FTP [illegible]

[illegible] FTP [illegible] shell [illegible]

[illegible] shell [illegible]cp[illegible]ls[illegible] shell [illegible] 0 [illegible] 1 [illegible]“[illegible]” [illegible]“Linux”[illegible]

[illegible]

1991[illegible]8[illegible]25[illegible] MINIX [illegible]

1991[illegible]9[illegible]17[illegible]·[illegible] FTP [illegible] Freax [illegible]·[illegible]·[illegible]

“[illegible] Linux [illegible]”

“[illegible]”

“[illegible] Linux [illegible] Unix [illegible]”

“[illegible]……[illegible] ”

[illegible] Linux [illegible] 10 [illegible]20 [illegible] Linux [illegible]Linus [illegible]

Linus[illegible]——[illegible]

Linux [illegible] Linux [illegible]
1991 [illegible] 0.01 [illegible] 1994 [illegible] 1.0 [illegible]
Linux [illegible] Linux [illegible] comp.os.linux[illegible]
Linux [illegible]
Linux [illegible]

[illegible] Linux [illegible]

[illegible]
Bug[illegible]Heisenbug[illegible]

[illegible] Linux [illegible] Linux [illegible]
[illegible] Linux [illegible]

[illegible] Linux [illegible]

1. [illegible]
2. [illegible]

[illegible] Linux [illegible]
[illegible] Linux [illegible] Linux [illegible]

Linus[illegible]——[illegible]

1996 [illegible]Linux [illegible] 2.0 [illegible] 27 [illegible]

[illegible]

[illegible]“[illegible]”[illegible]

[illegible]“[illegible]”[illegible]

[illegible] 150 [illegible]

[illegible] “[illegible]”

[illegible] Linux [illegible] Red Hat[illegible] Linux [illegible] Red Hat[illegible] Transmeta[illegible]“[illegible]” [illegible] 1997 [illegible]“This web page is not yet here” [illegible]

[illegible]Linux [illegible] Linux [illegible]

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[illegible]

[illegible] Linux [illegible] Linux [illegible]……

[illegible]

[illegible] 2002 [illegible] H1 [illegible]

[illegible] H1 [illegible] Linux [illegible]……

[illegible] 2003 [illegible]“[illegible]”[illegible]OSDL: Open Source Development Labs, Inc[illegible] Linux [illegible]Linux [illegible]……

Linus[illegible]——[illegible]

[illegible]“[illegible]”[illegible]

[illegible] Linux[illegible]

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[illegible] Linux [illegible]“[illegible]”[illegible]

Red Hat [illegible] “[illegible] ”Red Hat [illegible] “[illegible]” “[illegible] ”[illegible]

[illegible] Red Hat 1999 [illegible] 8 [illegible] 11 [illegible]

[illegible] Linux [illegible] “[illegible] Linux [illegible]”

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Linux [illegible] Linux [illegible] Linux [illegible]

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Linus[illegible]——[illegible]

[illegible] Linux [illegible]Linux [illegible] Windows NT [illegible] Server [illegible]·[illegible] Linux [illegible]

[illegible]·[illegible]

[illegible] Linux [illegible] OS X [illegible] Unix [illegible]

[illegible] “[illegible] ” [illegible]

[illegible] Apple I [illegible]“[illegible]”[illegible] Next [illegible]·[illegible]Mach [illegible]

[illegible] Linux [illegible] MacLinux [illegible] Mach [illegible]·[illegible] Mach [illegible] Linux [illegible] OS X [illegible] OS X [illegible] Mach [illegible] Linux [illegible] Mach [illegible] Linux [illegible] Mac [illegible] Linux [illegible]

[illegible]

[illegible]

[illegible] Mach [illegible]

[illegible] Mach [illegible] Linux [illegible] Linux [illegible]“[illegible]” [illegible]

[illegible] Linux [illegible]

[illegible] Linux [illegible] OS X [illegible] iOS [illegible] OS X [illegible] Linux [illegible]

[illegible] IT [illegible] Linux[illegible] BSD[illegible]2001 [illegible] FreeBSD [illegible] BSD [illegible]·[illegible] BSD [illegible] Unix [illegible] OS X [illegible] Darwin [illegible]Mach [illegible] BSD [illegible] LLVM [illegible] Clang[illegible] GCC [illegible] OS X [illegible] iOS [illegible]

Linux [illegible] Linux [illegible] Linux[illegible]OS X [illegible] iOS[illegible]Linux [illegible] Android[illegible] Unix[illegible] OS X [illegible] Linux [illegible]

Linus[illegible]——Linus [illegible] Git

[illegible] Linux [illegible]2003 [illegible] Linux [illegible]

2002 [illegible]Linux [illegible] BitKepper [illegible] BitKeeper [illegible] Linux [illegible] BitKeeper [illegible] Linux [illegible]2005 [illegible] BitMover [illegible] Linux [illegible] Git[illegible]Git [illegible] Git [illegible]

[illegible] SVN [illegible] CVS [illegible]Git [illegible]Git [illegible]Git [illegible]

2005 [illegible] Git [illegible] Git [illegible] 2008[illegible]2[illegible] Github [illegible] Git [illegible] Github[illegible] Github [illegible]

Git [illegible]

[illegible] Git [illegible]

Git [illegible] Git [illegible]

[illegible] Git [illegible] 9 [illegible]Git [illegible]

[illegible]Git [illegible] Git [illegible]

[illegible]

Linus[illegible]——[illegible]

[illegible]

[illegible]

[illegible] Linux[illegible]Solaris[illegible]——[illegible]

- [illegible]“[illegible]”[illegible]DNA[illegible]
- [illegible]“[illegible]”[illegible]
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[illegible]

[illegible]

- 1997[illegible] 2000 [illegible]
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- 2006 [illegible] 60 [illegible]
- 2012 [illegible] 4 [illegible] 20 [illegible]
- 2012 [illegible] 4 [illegible] 23 [illegible]Internet Society[illegible]ISOC[illegible]

[illegible] C++ [illegible]C++ [illegible] C++[illegible]Linux[illegible] Git[illegible]

[illegible]Talk is cheap, show me the code[illegible]2006 [illegible]Linux [illegible] 2% [illegible] 37 [illegible] 2012 [illegible] Linux [illegible]

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1. [illegible]Linux[illegible]
2. [illegible]
3. Mac OS X [illegible]——Linus Torvalds[illegible]

[illegible]



[illegible]/ Linus Tovalds

[illegible]•[illegible]Linux[illegible]1997[illegible]2003[illegible]Linux[illegible]2004[illegible]

[illegible]

[illegible]

[illegible]“[illegible]”[illegible]

[illegible]

[illegible]Linux[illegible]

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[illegible]“[illegible]”[illegible]“[illegible]”[illegible]

[illegible]“[illegible]”[illegible]emergent behavior[illegible]

[illegible]“[illegible]”[illegible]

[illegible]*Just for Fun*[illegible]

[illegible]

[illegible]“[illegible]”[illegible]“[illegible]”[illegible]……[illegible]

[illegible]“[illegible]”[illegible]“[illegible]”[illegible]

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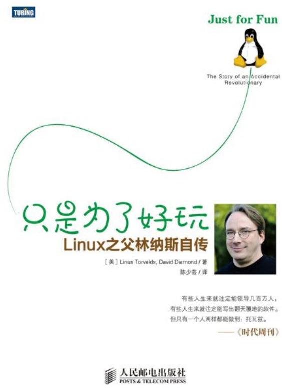
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[illegible] Linux [illegible] Linux [illegible] Linux [illegible]

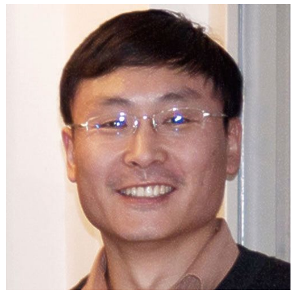
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2001[illegible]Linus[illegible]13[illegible]“[illegible]”[illegible]…… [illegible]

Git[illegible]C++[illegible]——Linus[illegible]C++[illegible]



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[illegible]QA[illegible]2006[illegible]20[illegible]JavaScript[illegible]
[illegible]2008[illegible]

From: Linus Torvalds (torvalds (at) linux-foundation.org)

Subject: Re: [RFC] Convert builin-mailinfo.c to use The Better String Library.

Newsgroups: gmane.comp.version-control.git

Date: 2007-09-06 17:50:28 GMT (4 years, 8 weeks, 1 day, 20 hours and 54 minutes ago)

2007-9-5[illegible]Dmitry Kakurin [illegible]

>[illegible]Git[illegible]

>1.[illegible]C[illegible]C++[illegible]

>2.[illegible]

[illegible]

C++[illegible]C++[illegible]C[illegible]

[illegible]C[illegible]Miles Bader[illegible]“[illegible]”[illegible]C++[illegible]C[illegible]“[illegible]”[illegible]

C++[illegible]STL[illegible]Boost[illegible]“[illegible]”[illegible]“[illegible]”[illegible]

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- [illegible]

[illegible]C++[illegible]C[illegible]C[illegible]“[illegible]”[illegible]

[illegible]Git[illegible]C++[illegible]“[illegible]”[illegible]

[illegible]C++[illegible]VCS[illegible]Monotone[illegible]“[illegible]”[illegible]“[illegible]”[illegible]“[illegible]C++[illegible]”[illegible]CS[illegible]

[illegible]Git[illegible]

Linus

[illegible]http://article.gmane.org/gmane.comp.version-control.git/57918

Linus Torvalds[illegible]

[illegible]/ Glyn Moody

Glyn Moody[illegible]Linux[illegible]*Rebel Code: Linux and the Open Source Revolution*[illegible]



[illegible]Linux[illegible]Linus[illegible]1996[illegible]“[illegible]”[illegible]Transmeta[illegible]

[illegible]LinuxCon[illegible]2012[illegible]Linux[illegible]

Glyn Moody: [illegible]15[illegible]

Linus Torvalds: [illegible]3[illegible]4[illegible]CPU[illegible]4000[illegible]

[illegible]CPU[illegible]SGI[illegible]PC[illegible]CPU[illegible]

[illegible]4000[illegible]CPU[illegible]2[illegible]CPU[illegible]

[illegible]SGI[illegible]CPU[illegible]8[illegible]16[illegible]CPU[illegible]8[illegible]

[illegible]hack[illegible]ARM[illegible]5[illegible]

[illegible]CPU[illegible]

[illegible]

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[illegible]**Linus**[illegible]

Glyn Moody: [illegible]

Linus Torvalds: USB[illegible]USB[illegible]USB3.0[illegible]USB[illegible]PCI[illegible]PCI[illegible]PCIe[illegible]

[illegible]Linux[illegible]Unix[illegible]Unix[illegible]USB[illegible]

Glyn Moody: [illegible]

Linus Torvalds: [illegible]50[illegible]4[illegible]3[illegible]1000[illegible]1000[illegible]

[illegible]4[illegible]2[illegible]

Glyn Moody: [illegible]

Linus Torvalds: [illegible]——[illegible]

[illegible]5[illegible]10[illegible]15[illegible]5[illegible]diffstat[illegible]15[illegible]25[illegible]diffstat[illegible]

Glyn Moody: [illegible]

Linus Torvalds: [illegible]——[illegible]bug[illegible]

bug[illegible]bug[illegible]Linux[illegible]bug[illegible]

[illegible]

Glyn Moody: [illegible]Git[illegible]

Linus Torvalds: [illegible]

[illegible]10[illegible]

[illegible]90%[illegible]90%[illegible]10%[illegible]

Glyn Moody: 16[illegible]

Linus Torvalds: [illegible]Android[illegible]

[illegible]——[illegible]——[illegible]

Glyn Moody: [illegible]

Linus Torvalds: [illegible]3-4[illegible]11[illegible]12[illegible]

[illegible]**Google**[illegible]

Glyn Moody: [illegible]

Linus Torvalds: [illegible]Google[illegible]Google[illegible]——[illegible]

[illegible]Google[illegible]Google[illegible]

Glyn Moody: Google[illegible]

Linus Torvalds: [illegible]5[illegible]10[illegible]Google[illegible]Google[illegible]Google[illegible]Google[illegible]

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Glyn Moody: [illegible]

Linus Torvalds: [illegible]20[illegible]

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[illegible]Interview: Linus Torvalds – I don't read code any more

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[illegible]/ David Diamond

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2009

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2011

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6□21□□Linus Torvalds □□ Linux 3.0 □□□

2013

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Linux

/Mike Gancarz

Mike Gancarz
Linux Unix Java Unix
Unix X Window
System Mike Gancarz Linux
Mike DEC Unix
Unix 64 Alpha
The Unix Philosophy Digital Press, 1995
Linux/Unix



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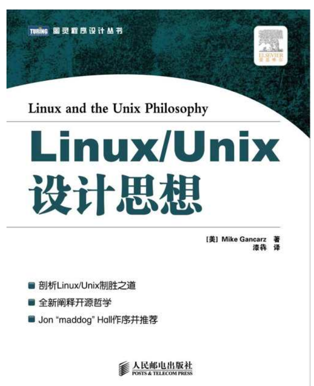
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[illegible]Linux[illegible](illegible]arch/[illegible])[illegible]MAINTAINERS[illegible]

MAINTAINERS

```
IA64 (Itanium) PLATFORM
P: Tony Luck
M: tony.luck@intel.com
L: linux-ia64@vger.kernel.org
W: http://www.ia64-linux.org/
T: git kernel.org:/pub/scm/linux/kernel/git/aegl/linux-2.6.git
S: Maintained
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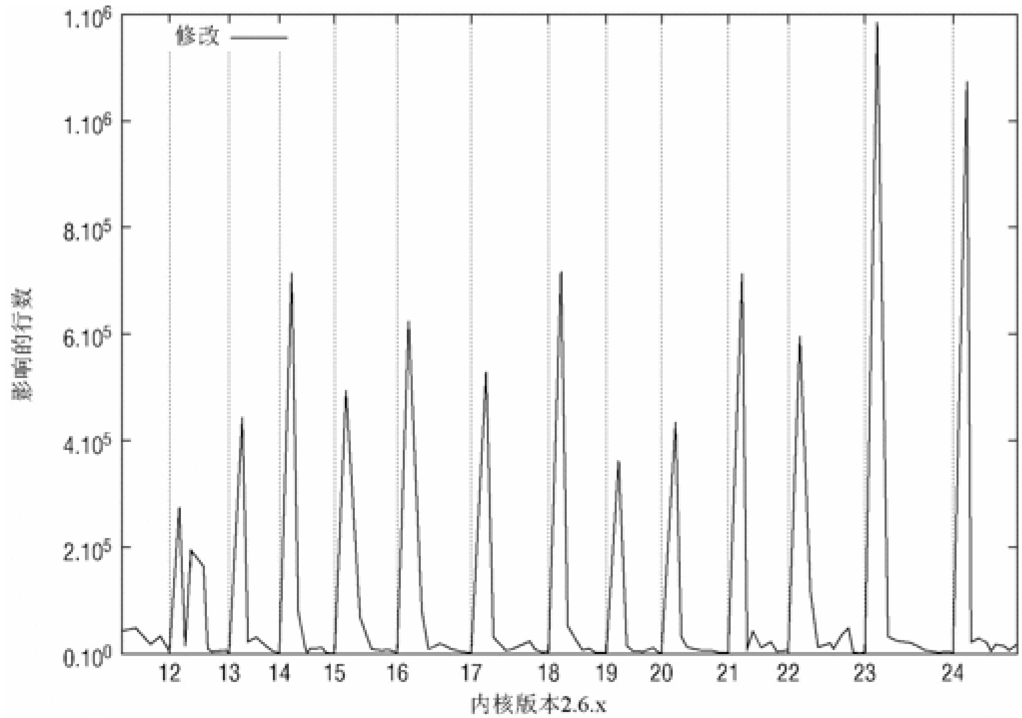
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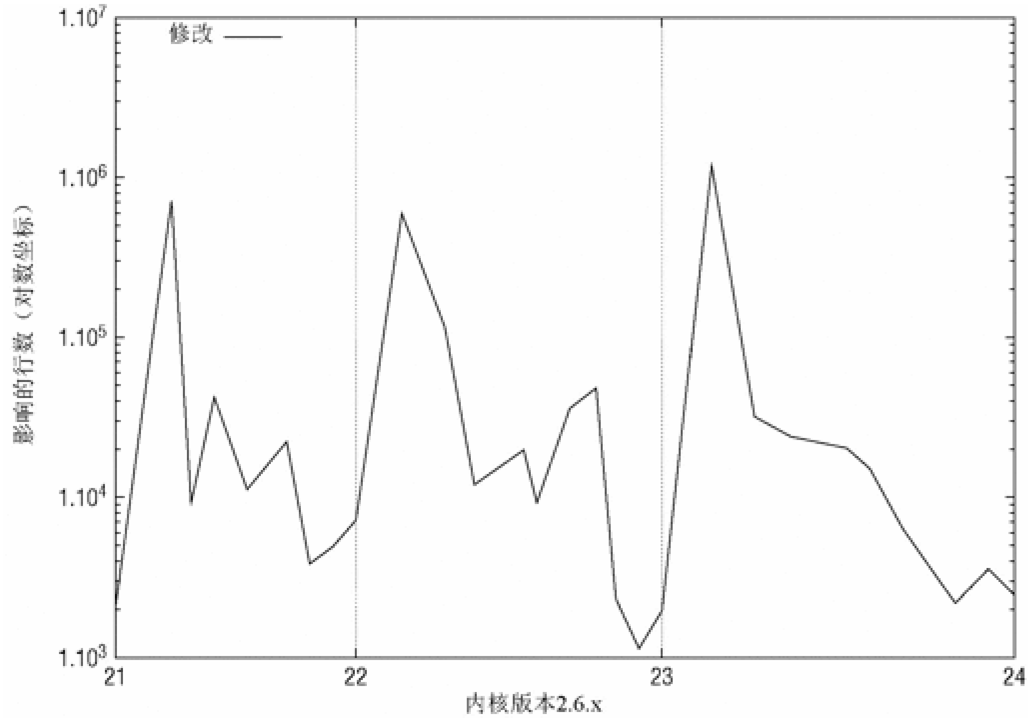
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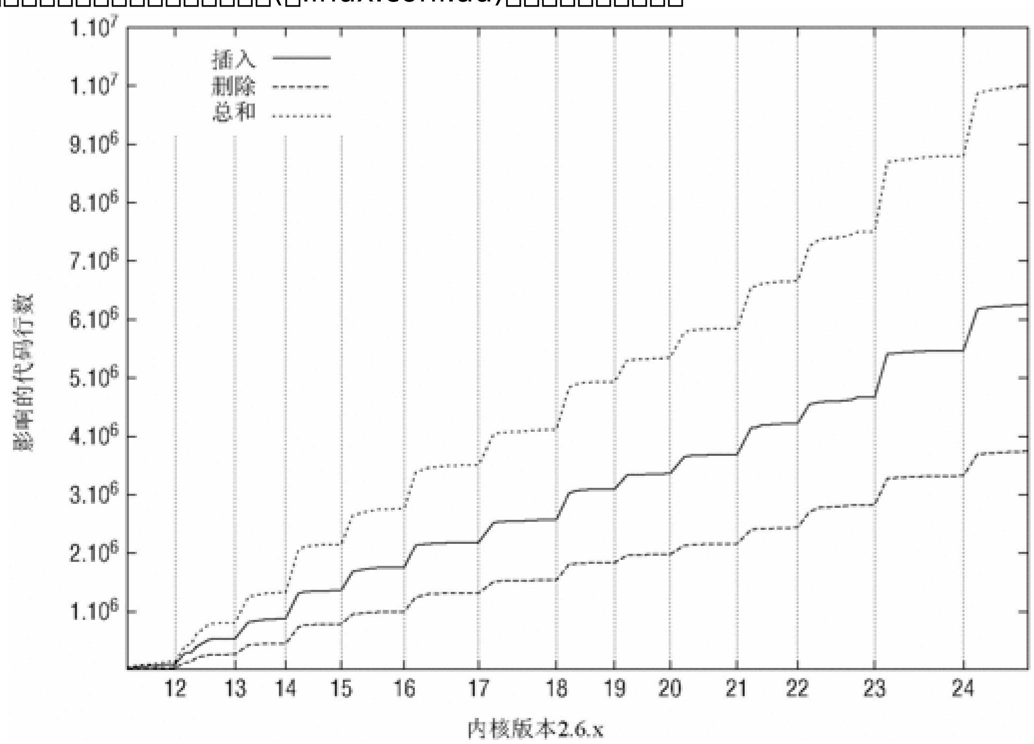


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[illegible]Reiser[illegible]vanilla[illegible]

[illegible]Ext4[illegible]vanilla[illegible]Ext3[illegible]

[illegible]

[illegible]Linux[illegible]Web[illegible]

- [illegible]www.kernel.org[illegible]git.kernel.org[illegible]git[illegible]
- www.lwn.net[illegible]Linux[illegible]IT[illegible][3]
- [illegible]www.linuxnewbies.net[illegible]
- Linux[illegible]“[illegible]”[illegible]Linux[illegible]URL[illegible]www.linux-foundation.org/en/Linux_Weather_Forecast[illegible]

[3] [illegible]LWN[illegible]

[illegible]

[illegible]

[illegible]
Documentation/SubmittingPatches[illegible]
[illegible]SubmittingPatches[illegible]
Andrew Morton[illegible]The Perfect Patch[illegible]
www.zip.com.au/~akpm/linux/patches/stuff/tpp.txt[illegible]
linux.yyz.us/patch-format.html[illegible]

[illegible]50 000[illegible]1 000[illegible]

[illegible]B[illegible]diff[illegible]patch[illegible]
[illegible]http://savannah.nongnu.org/projects/quilt[illegible]quilt[illegible]

[illegible]

[illegible]unified[illegible]C[illegible]
[illegible]diff -up[illegible]
diff -uprN[illegible]B[illegible]

1. [illegible]

[illegible]Documentation/CodingStyle[illegible]
[illegible]/[illegible]Linux[illegible]

Documentation/CodingStyle

[illegible]GNU[illegible]

[illegible]

- [illegible]tab[illegible]tab[illegible]8[illegible]

  [illegible]80[illegible]

  [illegible]
- [illegible]else[illegible]do[illegible]while[illegible]

[illegible]

[illegible]

[illegible]

kernel/sched.c

```
static void __update_rq_clock(struct rq *rq)
{
      u64 prev_raw = rq->prev_clock_raw;
      u64 now = sched_clock();
...
      if (unlikely(delta < 0)) {
              clock++;
              rq->clock_warps++;
      } else {
             /*
              * Catch too large forward jumps too:
              */
              if (unlikely(clock + delta > rq->tick_timestamp +
TICK_NSEC)) {
              if (clock < rq->tick_timestamp + TICK_NSEC)
                      clock = rq->tick_timestamp + TICK_NSEC;
              else
                      clock++;
              rq->clock_overflows++;
              } else {
                      if (unlikely(delta > rq->clock_max_delta))
                              rq->clock_max_delta = delta;
                      clock += delta;
              }
      }

      rq->prev_clock_raw = now;
      rq->clock = clock;
}
```

- [illegible] if(condition) [illegible] if(condition) [illegible] (if) [illegible]
- [illegible] enum [illegible]

- [illegible]24[illegible]
- [illegible] OnceUponATimeThereWasA-CounterWhichMustBeIntializedWithZero[illegible]tmp[illegible]

  [illegible]prio_tree_remove[illegible]cur[illegible]ret[illegible]
- typedef[illegible]

[illegible]atomic_t[illegible]pte_t[illegible]pud_t[illegible]

[illegible]Documentation/CodingStyle[illegible]17[illegible]

[illegible]

- Lindent[illegible]scripts/[illegible]GNU indent[illegible]
- checkpatch.pl[illegible]scripts/[illegible]

2. [illegible]

[illegible]C[illegible]

- [illegible]
- [illegible]
- [illegible]4 KiB[illegible]PAGE_SIZE[illegible]

- [illegible] u16[illegible]s64[illegible]sizeof(long) == sizeof(void *)[illegible]
- [illegible]
- [illegible]

3. [illegible]

[illegible]C[illegible]

fs/char_dev.c

```
/**
* register_chrdev() - Register a major number for character
devices.
* @major: major device number or 0 for dynamic allocation
* @name: name of this range of devices
* @fops: file operations associated with this devices
*
* If @major == 0 this functions will dynamically allocate a major
and return
* its number.
*
* If @major > 0 this function will attempt to reserve a device
with the given
* major number and will return zero on success.
*
* Returns a -ve errno on failure.
*
* The name of this device has nothing to do with the name of the
device in
* /dev. It only helps to keep track of the different owners of
devices. If
* your module name has only one type of devices it’s ok to use,
for example, the name
* of the module here.
*
* This function registers a range of 256 minor numbers. The first
minor number
* is 0.
*/
int register_chrdev(unsigned int major, const char *name,
const struct file_operations *fops)
...
```

[illegible]kerneldoc[illegible]API[illegible]make htmldocs[illegible]@[illegible]

- [illegible]
- [illegible]
- [illegible]/[illegible]

[illegible]

[illegible]

1. [illegible]

[illegible]Linus[illegible]Andrew[illegible]

- [illegible][PATCH][illegible]git[illegible]
- [illegible][RFC][illegible]
- [illegible][PATCH m/N][illegible]m[illegible]N[illegible][PATCH 0/N][illegible]
- [illegible]git[illegible]
- [illegible]base64[illegible]git[illegible]

[illegible]HTML[illegible]

[illegible]

```
[PATCH 0/4] [RFC] Verification and debugging of memory
initialisation Mel Gorman (Wed Apr 16 2008 - 09:51:19 EST)
    [PATCH 1/4] Add a basic debugging framework for memory
initialisation Mel Gorman (Wed Apr 16 2008 - 09:51:32 EST)
    [PATCH 2/4] Verify the page links and memory model Mel Gorman
(Wed Apr 16 2008 - 09:51:53 EST)
    [PATCH 3/4] Print out the zonelists on request for manual
```

```
verification Mel Gorman (Wed Apr 16 2008 - 09:52:22 EST)
    [PATCH 4/4] Make defencive checks around PFN values registered
for memory usage Mel Gorman (Wed Apr 16 2008 - 09:52:37 EST)
```

[illegible]4[illegible]

[illegible]

```
This patch creates a new file mm/mm_init.c which memory
initialisation should
be moved to over time to avoid further polluting page_alloc.c.
This patch
introduces a simple mminit_debug_printk() function and an
(undocumented)
mminit_debug_level command-line parameter for setting the level of
tracing
and verification that should be done.

Signed-off-by: Mel Gorman <mel@xxxxxxxxx>
---

mm/Makefile | 2 +-
mm/internal.h | 9 +++++++++
mm/mm_init.c | 40 ++++++++++++++++++++++++++++++++++++++++
mm/page_alloc.c | 16 ++++++++++------
4 files changed, 60 insertions(+), 7 deletions(-)

(PATCH)
```

[illegible]diffstat[illegible]diff[illegible]diff[illegible]

2. [illegible]

[illegible]signed-off[4][illegible]GNU General Public License[illegible]GPL[illegible]2[illegible]

[4] signed-off[illegible]——[illegible]

[illegible]sign off[illegible]

[illegible]vanilla[illegible]
[illegible]sign off[illegible]

[illegible]signed-off[illegible]sign off[illegible]

Documentation/SubmittingPatches

```
Developer's Certificate of Origin 1.1

By making a contribution to this project, I certify that:
(a) The contribution was created in whole or in part by me and I
have the right to submit it under the open source license
indicated in the file; or

(b) The contribution is based upon previous work that, to the best
of my knowledge, is covered under an appropriate open source
license and I have the right under that license to submit that
work with modifications, whether created in whole or in part by
me, under the same open source license (unless I am permitted to
submit under a different license), as indicated in the file; or

(c) The contribution was provided directly to me by some other
person who certified (a), (b) or (c) and I have not modified it.

(d) I understand and agree that this project and the contribution
are public and that a record of the contribution (including all
personal information I submit with it, including my sign-off) is
maintained indefinitely and may be redistributed consistent with
this project or the open source license(s) involved.
```

[illegible]sign off[illegible]“[illegible]”[illegible]SCO[illegible]Linux[illegible]sign off[illegible]Linus Torvalds[illegible][5]

[5] [illegible]Linux[illegible]

```
Some of you may have heard of this crazy company called SCO (aka
"Smoking
Crack Organization") who seem to have a hard time believing that
open
source works better than their five engineers do. They've
apparently made
a couple of outlandish claims about where our source code comes
from,
including claiming to own code that was clearly written by me over
```

```
a
decade ago.
```

SCO CEO UNIX
Signed-off-by

- Acked-by

  Acked-by

  Acked-by
  arch/xyz fs/
  M
  “ ”[6]

- CC

[6] “bad smell” ——

2.6.25 Reviewed-by

Documentation/SubmittingPatches

```
Reviewer's statement of oversight

By offering my Reviewed-by: tag, I state that:

(a) I have carried out a technical review of this patch to
evaluate its appropriateness and readiness for inclusion into the
mainline kernel.

(b) Any problems, concerns, or questions relating to the patch
have been communicated back to the submitter. I am satisfied with
the submitter's response to my comments.

(c) While there may be things that could be improved with this
submission, I believe that it is, at this time, (1) a worthwhile
```

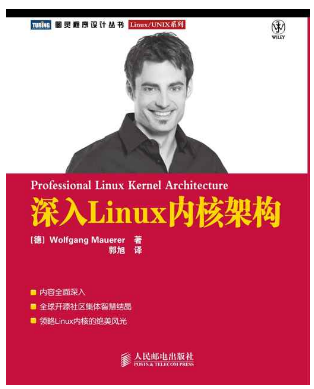
```
modification to the kernel, and (2) free of known issues which
would argue against its inclusion.

(d) While I have reviewed the patch and believe it to be sound, I
do not (unless explicitly stated elsewhere) make any warranties or
guarantees that it will achieve its stated purpose or function
properly in any given situation.
```

[illegible]Tested-by[illegible]Tested-by[illegible]

[illegible]

[illegible]Linux[illegible]“[illegible]”[illegible]



[illegible]Linux[illegible]Linux[illegible]2.6.24[illegible]Linux[illegible]Linux[illegible]Linux[illegible]Linux[illegible]

Linux□□□□□□□□□□□□□

□□/ □□□Jie Zhang

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Jie Zhang□□□□,□□□Jack of Spades Combo□□1999□3□□□□□□□PC Magazine□□□Editors' Choice□□□□□PC Computing MVP Finalist Award□□□1998□□□□Linux□□□□□□□Linux□□



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[illegible] Linux [illegible] Linux[illegible]

[illegible]

[illegible] Linux[illegible]“[illegible]”[illegible] Linux [illegible]

[illegible]Linux[illegible] 90%[illegible] ssh [illegible]“[illegible]”[illegible]

[illegible]“[illegible]”[illegible]——[illegible] Linux [illegible]“[illegible]”[illegible]

[illegible] Jon Bently[illegible] 10%[illegible]Donald Knuth [illegible] 1946 [illegible] Bug [illegible] 1[illegible] C [illegible]

[illegible] 1[illegible]

```
static int binary_search( int target, int array[], int size )
{
 int l = 0, r = size -1;
 int h = 0;
 if( size <= 0 )
 return -1;
 while( l <= r ) {
  h = ( l + r ) / 2;
  if ( target > array[h] )
  l = h + 1;
  else if( target < array[h] )
   r = h - 1;
  else
```

```
    return target;
        }
 return -1;
}
```

[illegible]

```
h = ( 1 + r ) / 2;
```

[illegible] h [illegible]int[illegible] 32[illegible] 64 [illegible] 2147483647[illegible] l [illegible] r [illegible]①[illegible]“[illegible]”[illegible]

```
h = l + ( ( r - l ) / 2 );
```

[illegible] Java [illegible]

```
h = ( l + r ) >>> 1;
```

[illegible]“[illegible]”[illegible]SQL [illegible] 500 [illegible]

[illegible] 12 [illegible]Linux [illegible] Linux[illegible]

“[illegible]”

[illegible] Linux [illegible]

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1. SELinux □□□□□□

□□□SELinux □□□□□□□□ MAC □□□□□□□ Linux □□□□□□□□□□□□□
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□□□SELinux □□□□ Security Enhanced Linux□□□□□□□□□□□
Linux□□Linux □□□□□□□□□□□□□□

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Security Agency□□SCC□Secure Computing Corporation□□□□□
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□□□SELinux □□ 2.6 □□□ Linux □□□□□□□□□□□□□□□□□□□ Linux
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2. □□ SELinux

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□□□□□□□□□□□□/etc/sysconfig/selinux□□□□□□□□□□□□□□□□□□

```
#This file controls the state of SELinux on the system.
# SELINUX= can take one of these three values:
#     enforcing - SELinux security policy is enforced.
#     permissive - SELinux prints warnings instead of enforcing.
#     disabled - No SELinux policy is loaded.
SELINUX=disabled
```

```
# SELINUXTYPE= can take one of these two values:
#     targeted - Targeted processes are protected,
#     mls - Multi Level Security protection.
SELINUXTYPE=targeted
```

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```
# This file controls the state of SELinux on the system.
# SELINUX= can take one of these three values:
#     enforcing - SELinux security policy is enforced.
#     permissive - SELinux prints warnings instead of enforcing.
#     disabled - No SELinux policy is loaded.
SELINUX=enforcing
# SELINUXTYPE= can take one of these two values:
#     targeted - Targeted processes are protected,
#     mls - Multi Level Security protection.
SELINUXTYPE=targeted
```

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disable □□□□□□□□□□□□□□□□ enforcing □□ SELinux □□□□□□□□□□□□□□□□□□□□□□□□ SELinux □□□□□□□□□□□□□□□□□□□ enforcing □□□□□□□ permissive □□□□□ SELinux□□□ permissive □□□□□□□□□□□□□□□□□□□□□ SELinux □□□

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```
SELinux status:     enabled
SELinuxfs mount:   /selinux
Current mode:    enforcing
Mode from config file:  enforcing
Policy version:     24
Policy from config file: targeted
```

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[illegible] SELinux[illegible] enforcing [illegible]/lib [illegible] SELinux [illegible] permissive [illegible]“restorecon -Rv/”[illegible] SELINUXTYPE=targeted[illegible] SELINUXTPE=mls[illegible]

[illegible] GRUB [illegible] enforcing=0 [illegible]

[illegible] SELinux [illegible]permissive [illegible] dmesg [illegible]

[illegible] SELINUXTYPE=targeted [illegible] SELINUXTYPE=mls [illegible]

3. [illegible]

[illegible] SELinux[illegible]——[illegible]context[illegible]

[illegible] SELinux[illegible]/[illegible]“:”[illegible]“id -Z”[illegible]

```
unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023
```

[illegible]“ps -Z”[illegible]“ls -Z”[illegible]

[illegible] Linux[illegible] SELinux [illegible] Linux [illegible]su [illegible] SELinux [illegible]

[illegible] Linux [illegible] SELinux [illegible]/[illegible] Linux [illegible]/[illegible] SELinux [illegible]“semanage login -l”[illegible]

```
Login Name  SELinux User  MLS/MCS Range
__default__  unconfined_u  s0-s0:c0.c1023
root   unconfined_u  s0-s0:c0.c1023
```

```
system_u  system_u   s0-s0:c0.c1023
```

[illegible]……[illegible]/[illegible]……

[illegible] SELinux [illegible]

4. [illegible]

[illegible] SELinux[illegible] Linux UID[illegible] SELinux [illegible] Linux [illegible] SELinux [illegible] su [illegible] SELinux[illegible]

5. SELinux [illegible]

[illegible] SELinux [illegible] MAC[illegible] SELinux [illegible]

[illegible] SELINUXTYPE [illegible] Linux [illegible] SELINUXTYPE [illegible]

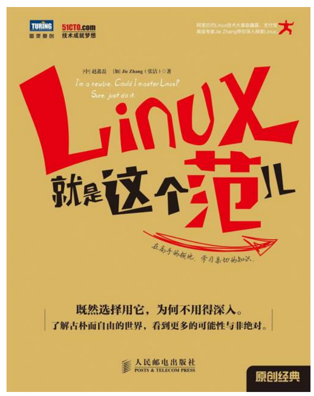
[illegible] CentOS 6.x[illegible] targeted[illegible]mls [illegible] minimum[illegible]targeted [illegible] CentOS 6.x [illegible] CentOS 4[illegible] 15 [illegible] targets [illegible] httpd[illegible]named[illegible] dhcpd[illegible] mysqld[illegible] CentOS [illegible]targets [illegible] 200 [illegible] targeted [illegible] SELinux [illegible] SELinux[illegible] UNIX [illegible]SELinux [illegible] mls [illegible] MLS [illegible]/etc/sysconfig/selinux[illegible]SELINUXTYPE=targeted[illegible] SELINUXTYPE=mls[illegible]chcon[illegible] semanage [illegible]“[illegible]”[illegible]SELinux [illegible] targeted [illegible] SELinux [illegible] targeted[illegible] minimum[illegible] base policy[illegible]targeted [illegible] selinux-policy-minimum rpm [illegible]

[illegible]

[illegible] Linux [illegible]LIDS[illegible] Linux [illegible] Linux [illegible]

[illegible]“[illegible]”[illegible]sysylogd [illegible]syslogd [illegible]/var/log/[illegible] who[illegible]when[illegible]where [illegible] what [illegible]

[illegible]



[illegible]Linux[illegible]Linux[illegible]Linux[illegible]Linux[illegible]Linux[illegible]

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1. Shell□□□□Unix□□□□□□□□□□□□Unix Shell□□·□□□□Ken Thompson□□Multics□□Shell□□□□1971□□□□□□□□□Thompson sh□□□□□□□□□bash□shell□□□□□□□□□□□□□□□□□□□□□□□Linux kernel□□□□□□Linux□□□□□□Shell□□Kernel□

2. □□□□□□*nix□MacOS□□□□□□□□□Shell□□bash□bash□Brian Fox□1987□□□□□□Bourne Again shell (bash)□

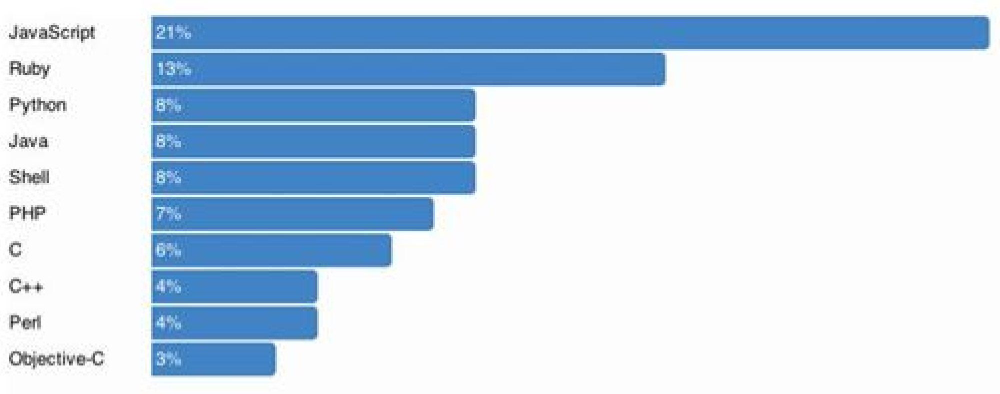
3. □□□□□□□bash□□□□□Bourne shell (sh)□Korn shell (ksh)□C shell □□□ csh and tcsh□□□□□□□□□□□□□□□□□□50□□□□shell□□□□□□□□□□□ http://www.freebsd.org/ports/shells.html□

4. □□□tiobe□□2012□11□□□tiobe□□□□□□□□□□□□□bash□□□□0.56%□□22□□□□□□□□□□awk 0.21%□tcl 0.146%□□□□□□□14□□□□□□□□□□bash□□□□□□□□csh□ksh□□□□□□□shell□□□□□□□□□□□□□□□□□□□shell□□□□□□□□□□□“□□□”□□□□objective-c□□□□□□□□□□□□□□□Apple□□□□□□□□□□□□□□□□□□□□□□

Position Nov 2012	Position Nov 2011	Delta in Position	Programming Language	Ratings Nov 2012	Delta Nov 2011	Status
1	2	↑	C	19.224%	+1.90%	A
2	1	↓	Java	17.455%	-0.42%	A
3	6	↑↑↑	Objective-C	10.383%	+4.40%	A
4	3	↓	C++	9.698%	+1.61%	A
5	5	=	PHP	5.732%	-0.36%	A
6	4	↓↓	C#	5.591%	-1.73%	A
7	7	=	(Visual) Basic	5.032%	-0.01%	A
8	8	=	Python	4.062%	+0.45%	A
9	10	↑	Perl	2.182%	+0.10%	A
10	11	↑	Ruby	1.739%	+0.24%	A
11	9	↓↓	JavaScript	1.278%	-1.29%	A
12	16	↑↑↑↑	Delphi/Object Pascal	0.995%	+0.12%	A
13	13	=	Lisp	0.951%	-0.23%	A
14	14	=	Pascal	0.881%	-0.11%	A
15	23	↑↑↑↑↑↑↑↑	Visual Basic .NET	0.769%	+0.24%	A-
16	19	↑↑↑	Ada	0.662%	+0.04%	B
17	12	↓↓↓↓↓	PL/SQL	0.632%	-0.81%	B
18	18	=	Lua	0.631%	0.00%	A-
19	15	↓↓↓↓	MATLAB	0.620%	-0.34%	B
20	24	↑↑↑↑	Assembly	0.585%	+0.06%	B

Position	Programming Language	Ratings
21	SAS	0.577%
22	Bash	0.562%
23	Transact-SQL	0.473%
24	COBOL	0.471%
25	ABAP	0.442%
26	Fortran	0.437%
27	Scheme	0.418%
28	R	0.417%
29	Scratch	0.406%
30	Logo	0.389%
31	Prolog	0.360%
32	Erlang	0.339%
33	RPG (OS/400)	0.330%
34	Scala	0.324%
35	Haskell	0.323%
36	D	0.283%
37	Smalltalk	0.254%
38	APL	0.236%
39	Forth	0.228%
40	ML	0.226%

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1. sudo !!

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2. cd –

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□□□□□□□□□□/home/a□□cd ../b□□□/home/b□□□□□□□□□□□□cd –□□□/home/a□/home/b□□□□□□□□□□

3. ^old^new

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□□□echo "wanderful"□□□□□□□echo "wonderful"□□□□^a^o□□□□□□□□□□□□□□□□□□□□□□□□

4. man ascii

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5. ctrl-x e

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6. netstat –tlnp

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7. tail -f /path/to/file.log | sed '/^Finished: SUCCESS$/ q'

□file.log□□□Finished: SUCCESS□□□□□tail□□□□□□□□□□□□□□□□log□□□□□□□□□□□

8. ssh user@server bash < /path/to/local/script.sh

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9. screen -d -m -S some_name ping my_router

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10. wget --random-wait -r -p -e robots=off -U mozilla http://www.example.com

□□□□www.example.com□□□

11. curl ifconfig.me

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12. lsof –i

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13. python -m SimpleHTTPServer

□□□□□□□HTTP server□□□□□□□□HTTP□□□□□□□□□ http://localhost:8000□□ □□□□□□□□□□□□□□HTTP□□□□□□□□

□□□□□□□——

14. history | awk '{CMD[$2]++;count++;} END { for (a in CMD)print CMD[a] " " CMD[a]/count*100 "% " a }' | grep -v "./" | column -c3 -s " " -t | sort -nr | nl | head -n10

□□□*nix shell□□□□□□□□Linux□□□□Shell□□□□□□□□□

□□□□□□Shell□□□□□□

“Where there is a shell□there is a way!”



Linux[illegible]



[illegible]/ Wolfgang Mauerer

Wolfgang Mauerer[illegible]Linux[illegible]Linux[illegible]1997[illegible]Linux[illegible]LaTeX[illegible]



[illegible]Linux[illegible]Linux[illegible][1]

[1] [illegible]

[illegible]loop quantum gravity[illegible]

[illegible]Linux[illegible]

[illegible]UNIX[illegible]BSD[illegible]UNIX[illegible]BSD[illegible]

[illegible]Linux[illegible]KHCM[illegible]Linux[illegible]0.8%[illegible]0.8%[illegible]Linux[illegible]

Linux[illegible]Linus Torvalds[illegible]Linux[illegible]Minix[illegible]Torvalds[illegible]Minix[illegible]Andrew Tanenbaum[illegible]

Tanenbaum[illegible]Linux[illegible]Usenet[illegible]“Linux is obsolete”[illegible]Linus Torvalds[illegible]

Re 2: [illegible]minix[illegible]

[illegible]Linus[illegible]

[illegible]Rob Pike[illegible]UNIX[illegible][2]

[2] [illegible]www.cs.bell-labs.com/who/rob/utah2000.pdf[illegible]Pike[illegible]

[illegible]Linux[illegible]Linux[illegible]Rik van Riel[illegible]Linux[illegible]

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Linux

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Documentation/ManagementStyle

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The option of being unfailingly polite really doesn't exist.
Nobody will
trust somebody who is so clearly hiding his true character.
```

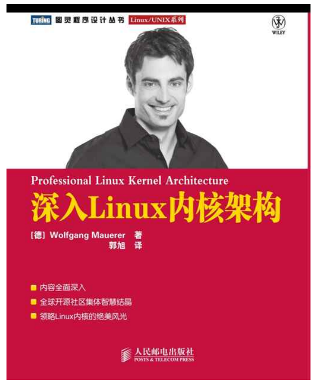
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